

In re Application of WITT et al.
Serial No. 09/560,788

REMARKS

The Office action has been carefully considered. The Office action rejected claims 1-4, 6-17, 19-24, 26-35, 37-39, and 46-49 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,618,735 to Krishnaswami et al. ("Krishnaswami"). Furthermore, the Office action rejected claims 1, 20, 31, and 46-48 under the judicially created doctrine of obviousness-type double patenting. Regarding the obviousness-type double patenting rejection, applicants will timely file a terminal disclaimer upon indication of allowable subject matter. Regarding the rejections under §102(e), applicants respectfully disagree.

By present amendment, claims 1, 6, 8, 10, 19, 20, 23, 24, 26, 28-31, 38, and 46-48 have been amended. Applicants submit that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Applicants thank the Examiner for the interview held (by telephone) on December 14, 2004. During the interview, the Examiner and applicants' attorney discussed the claims with respect to the prior art. The essence of applicants' position is incorporated in the remarks below.

Prior to discussing reasons why applicants believe that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is generally directed to a file protection system and method that deals with the implementation of possible file changes to files

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designated as protected files. In one embodiment of the invention, when a possible change to a protected file is about to occur, the system may determine whether the possible file change is valid or not valid prior to the possible change being implemented. If not valid, the possible change may be prevented from being implemented. That is, the possible change to the protected file may not ever occur. This method of file protection is called synchronous file protection.

The claims of the present invention are directed toward a synchronous protection system and method. Significantly, the system may be operable to detect that a possible change may be about to be implemented on a protected file. The possible change may be checked for validity, and if the possible change may be found to be not valid, the possible change to the file may be prevented from ever occurring, *i.e.*, prevented from being implemented. Thus, by preventing possible changes from being implemented, there is no need to undo changes to protected files when invalid changes are detected. Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

Turning to the first independent claim, amended claim 1 recites in a computer system, a method comprising receiving information indicative of a possible change to a protected file, and determining whether the possible change is valid by verifying the file, the verifying performed by a verification mechanism, and if not valid, preventing the possible change from being implemented including discarding the information indicative of the possible change and returning a success to a component.

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The Office action rejected claim 1 as being anticipated by Krishnaswami. More specifically, the Office action contends that Krishnaswami teaches receiving information indicative of a possible change to a protected file. No specific reference to Krishnaswami was given. Further, the Office action contends that Krishnaswami teaches determining whether the change is valid by verifying the file, the verifying performed by a verification mechanism, and if not valid, preventing the change including discarding the information indicative of the change and returning a success to a component. Column 1, line 64 to column 2, line 6, and column 10, lines 2-10 of Krishnaswami are referenced. Applicants respectfully disagree.

In the cited and applied reference, Krishnaswami teaches, generally, a system and method for protecting the security of computer files. More specifically, the system is operable to detect changes that have already been made to a protected file. In Krishnaswami, when a protected system file is invalidly overwritten by an invalid file or otherwise improper change, the invalid change (which has already been implemented) is detected by the system and undone (*i.e.*, changed back) to restore the original file. See Column 5, lines 1-9 of Krishnaswami.

As was discussed above, the system and method taught by Krishnaswami is an asynchronous system in that file protection is implemented after the fact. Changes to protected files determined to be invalid are changed again in order to get back to the original unchanged file. Quite different from the present invention, Krishnaswami simply does not teach the synchronous method of *preventing* a possible change from being implemented if the possible change is not valid as

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recited in claim 1. Any invalid changes implemented in the system of Krishnaswami are determined to be invalid only after the change has been implemented. Thus, the system of Krishnaswami does not prevent invalid changes from being initially made. For at least these reasons, applicants submit that claim 1 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 2-4, 6-17, and 19, by similar analysis, are allowable. These claims depend directly from claim 1 and consequently include the recitations of independent claim 1. As discussed above, Krishnaswami fails to disclose the recitations of claim 1, and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, these claims include additional patentable elements.

For example, claim 6 recites the method of claim 1 wherein determining whether the possible change is valid by verifying the file includes obtaining cryptographic hash information of the changed file and comparing the cryptographic hash information against cryptographic hash information associated with the protected file. The prior art of record does not teach a cryptographic hash function nor show any appreciation for a verification mechanism or process.

Turning to the next independent claim, amended claim 20 recites a computer-readable medium having computer-executable instructions, comprising (1) selecting a plurality of files as protected files, (2) receiving information indicative of a possible change to a protected file, (3) determining whether the file is an exception case, and (a) if an exception case, allowing the change, or (b) if not an exception case, determining whether the possible change is valid by verifying the

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file, the verifying performed by a verification mechanism, and (i) if valid, allowing the possible change to be implemented, and (ii) if not valid, preventing the possible change from being implemented, and (4) returning information indicative of a success.

The Office action rejected claim 20 as being anticipated by Krishnaswami. Essentially, the Office action contends that Krishnaswami teaches the recitations of claim 20 and cites the same sections of Krishnaswami as were cited with respect to the rejection of claim 1. Applicants respectfully disagree.

As discussed above, Krishnaswami teaches, generally, a system and method for protecting the security of computer files. More specifically, the system is operable to detect changes that have already been made to a protected file. That is, when a protected system file is invalidly overwritten by an invalid file or otherwise improper change, the invalid change (which has already been implemented) is detected by the system and undone (*i.e.*, changed back) to restore the original file. See Column 5, lines 1-9 of Krishnaswami.

As was also discussed above, the system and method taught by Krishnaswami is an asynchronous system in that file protection is implemented after the fact. Changes determined to be invalid are changed again in order to get back to the original file. Quite different from the present invention, Krishnaswami simply does not teach the synchronous method of *preventing* a possible change from being implemented if the possible change is not valid as recited in claim 20. Any invalid changes implemented in the system of Krishnaswami are determined to be invalid only after the change has been implemented. Thus, the system of

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Krishnaswami does not prevent invalid changes from being initially made. For at least these reasons, applicants submit that claim 20 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 22-24, and 26-29, by similar analysis, are allowable. These claims depend directly from claim 20 and consequently include the recitations of independent claim 20. As discussed above, Krishnaswami fails to disclose the recitations of claim 20 and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 20 noted above, these claims include additional patentable elements.

Turning to the next independent claim, amended claim 30 recites a computer system, comprising, a protected file, a detection mechanism configured to determine when the protected file may be changed by a possible change, a verification mechanism; and a file protection service, the file protection service configured to receive a determination from the detection mechanism that the protected file may be changed, and further configured to communicate with the verification mechanism to verify whether the possible change is valid, and to prevent the possible change from being implemented by discarding the possible change when the possible change is not valid.

The Office action rejected claim 30 as being anticipated by Krishnaswami. Again, the Office action contends that Krishnaswami teaches the recitations of claim 30 and cites the same sections of Krishnaswami as were cited with respect to the rejection of claim 1. Applicants respectfully disagree.

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Again, Krishnaswami teaches, generally, a system and method for protecting the security of computer files. More specifically, the system is operable to detect changes that have already been made to a protected file. That is, when a protected system file is invalidly overwritten by an invalid file or otherwise improper change, the invalid change (which has already been implemented) is detected by the system and undone (*i.e.*, changed back) to restore the original file. See Column 5, lines 1-9 of Krishnaswami.

Again, as was discussed above, the system and method taught by Krishnaswami is an asynchronous system in that file protection is implemented after the fact. Changes determined to be invalid are changed again in order to get back to the original file. Quite different from the present invention, Krishnaswami simply does not teach the synchronous method of *preventing* a possible change from being implemented if the possible change is not valid as recited in claim 30. For at least these reasons, applicants submit that claim 30 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 31-35 and 37-39, by similar analysis, are allowable. These claims depend directly from claim 30 and consequently include the recitations of independent claim 30. As discussed above, Krishnaswami fails to disclose the recitations of claim 30, and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 30 noted above, these claims include additional patentable elements.

Turning to the next independent claim, amended claim 46 recites a computer system, comprising, a protected file, a detection mechanism configured

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to determine when the protected file may be changed by a possible change, a verification mechanism, and a file protection service, the file protection service configured to receive a determination from the detection mechanism that the protected file may be changed, and further configured to communicate with the verification mechanism to verify whether the possible change is valid, and to prevent the possible change from being implemented by locating valid data in a system cache and copying the valid data over changed data when the possible change is not valid.

The Office action rejected claim 46 as being anticipated by Krishnaswami. Again, the Office action contends that Krishnaswami teaches the recitations of claim 46 and cites the same sections of Krishnaswami as were cited with respect to the rejection of claim 1. Applicants respectfully disagree.

As was discussed above, the system and method taught by Krishnaswami is an asynchronous system in that file protection is implemented after the fact. Changes determined to be invalid are changed again in order to get back to the original file. Quite different from the present invention, Krishnaswami simply does not teach the synchronous method of *preventing* a possible change from being implemented if the possible change is not valid as recited in claim 46. For at least these reasons, applicants submit that claim 46 is allowable over the prior art of record.

Turning to the next independent claim, amended claim 47 recites a computer system, comprising, a protected file, a detection mechanism configured to determine when the protected file may be changed by a possible change, a

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verification mechanism, and a file protection service, the file protection service configured to receive a determination from the detection mechanism that the protected file may be changed, and further configured to communicate with the verification mechanism to verify whether the possible change is valid, and to prevent the possible change from being implemented by locating valid data at a network share and copying the valid data over changed data when the possible change is not valid.

The Office action rejected claim 47 as being anticipated by Krishnaswami. Again, the Office action contends that Krishnaswami teaches the recitations of claim 47 and cites the same sections of Krishnaswami as were cited with respect to the rejection of claim 1. Applicants respectfully disagree.

As was discussed above, the system and method taught by Krishnaswami is an asynchronous system in that file protection is implemented after the fact. Changes determined to be invalid are changed again in order to get back to the original file. Quite different from the present invention, Krishnaswami simply does not teach the synchronous method of *preventing* a possible change from being implemented if the possible change is not valid as recited in claim 47. For at least these reasons, applicants submit that claim 47 is allowable over the prior art of record.

Turning to the last independent claim, amended claim 48 recites a computer system, comprising, a protected file, a detection mechanism configured to determine when the protected file may be changed by a possible change, a verification mechanism, and a file protection service, the file protection service

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configured to receive a determination from the detection mechanism that the protected file may be changed, and further configured to communicate with the verification mechanism to verify whether the possible change is valid, and to prevent the possible change from being implemented by locating valid data in a recorded medium and copying the valid data over changed data when the possible change is not valid.

The Office action rejected claim 48 as being anticipated by Krishnaswami. Again, the Office action contends that Krishnaswami teaches the recitations of claim 47 and cites the same sections of Krishnaswami as were cited with respect to the rejection of claim 1. Applicants respectfully disagree.

As has been repeatedly discussed above, the system and method taught by Krishnaswami is an asynchronous system in that file protection is implemented after the fact. Changes determined to be invalid are changed again in order to get back to the original file. Quite different from the present invention, Krishnaswami simply does not teach the synchronous method of *preventing* a possible change from being implemented if the possible change is not valid as recited in claim 48. For at least these reasons, applicants submit that claim 48 is allowable over the prior art of record.

Applicants respectfully submit that dependent claim 49, by similar analysis, is allowable. This claim depends directly from claim 48 and consequently includes the recitations of independent claim 48. As discussed above, Krishnaswami fails to disclose the recitations of claim 48 and, therefore, this claim is also allowable over

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the prior art of record. In addition to the recitations of claim 48 noted above, this claim includes additional patentable elements.

For at least these reasons, applicants submit that all the pending claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

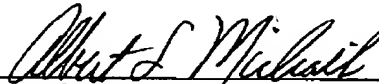
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CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-4, 6-17, 19-24, 26-35, 37-39 and 46-49 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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